DOCUMENT RESUME

ED 287 781 SO 018 518

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TITLE Modeling To Enhance Critical Thinking and Decision Making Skills Development in the Instructional Process: The Social Studies.
PUB DATE 87
NOTE 26p.; This paper is a compilation of presentations made by the author (founder of the "Thought and Action Network") during 1987 at various national/international conferences on critical thinking and decision making.
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Citizenship Education; *Cognitive Processes; Convergent Thinking; Creative Teaching; *Critical Thinking; *Decision Making; Discovery Learning; Elementary Secondary Education; Evaluative Thinking; Inferences; Inquiry; Interdisciplinary Approach; Learning Activities; Logical Thinking; Role Playing; Simulation; Social Studies; *Teaching Methods

ABSTRACT

Students must be actively involved in the process of learning for it to have personal meaning and importance in their lives. Teachers must also become critical thinkers, creative individuals, and decision makers in order to create more challenging learning environments. Teachers need to blend structure and spontaneity into meaningful learning experiences and incorporate these experiences into instructional strategies and curricula. The Proactive Action Model (PAM) strategy is one way to blend structure and spontaneity into meaningful learning experiences. The PAM strategy is an inquiry based learning model in which students: (1) identify a conflict/issue/ problem; (2) research data and generate an hypothesis; (3) conduct an empirical study, collect data, and arrive at a conclusion; and (4) design a resolution strategy. Other activities to enhance student abilities and competence in critical thinking and decision making are: (1) designing and constructing table-top dioramas, maps, and visual aids; (2) developing research papers; (3) role playing; (4) developing and presenting oral reports; (5) debating; (6) video recording community studies; (7) interviewing; and (8) researching primary and secondary source materials. This paper also includes a description of the inservice program developed by the Thought/Action Network. A bibliography is appended. (SM)

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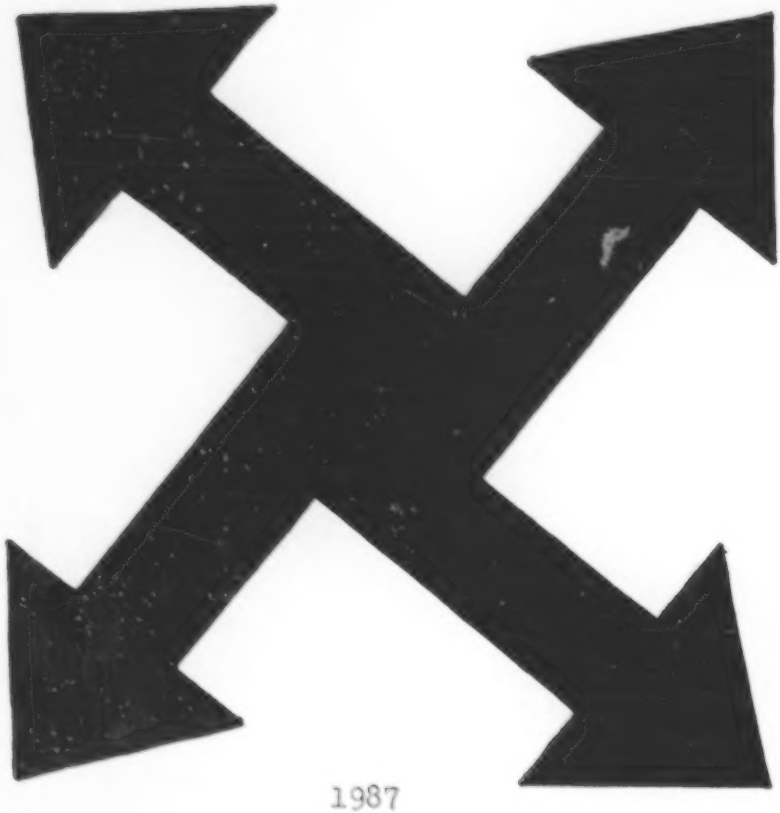
MODELING TO ENHANCE CRITICAL THINKING AND DECISION MAKING SKILLS DEVELOPMENT IN THE INSTRUCTIONAL PROCESS - The Social Studies

Richard Peters, Ed.D.
THOUGHT and ACTION NETWORK



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This paper is a compilation of presentations made during 1987 at various national/international conferences on critical thinking and decision making.

"A Modeling Strategy to Affect Critical Thinking and Decision Making Among Proactive Action Students"
CONFERENCE '87 ON CRITICAL THINKING
Christopher Newport College

"Utilizing the PAM Model to Affect Critical Thinking and Decision Making Skills Development Among Minorities in the Public Schools and in Post-Secondary Education"
INTERNATIONAL CONFERENCE ON INEQUALITY AND DEVELOPMENT
The University of Utah

"Critical Thinking in the American Education Process"
THE INTERNATIONAL SOCIETY FOR EXPLORING TEACHING ALTERNATIVES
Colorado State University

"The Development and Application of Critical Thinking and Decision Making Skills in Classroom and Field-Based Learning Environments for Elementary/Secondary Grade Students and Post-Secondary Education"
NATIONAL CONFERENCE ON INTELLECTUAL SKILLS DEVELOPMENT
Western Michigan University

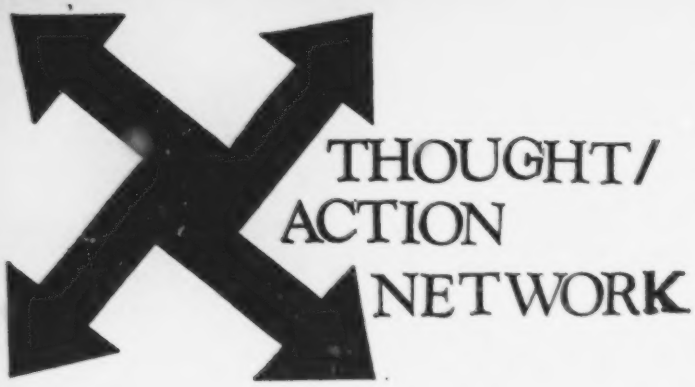
ABOUT THE AUTHOR

Dr. Richard Peters has been involved with Kindergarten through Grade Twelve instructional program development and curriculum coordination since 1968.

During the course of his professional activities as a classroom teacher, department chairman, curriculum coordinator, federal-funded project administrator, and curriculum designer, Dr. Peters has been involved with the design/development of several strategies to affect skills development in critical thinking and decision making.

Dr. Peters has founded THOUGHT/ACTION NETWORK for the purpose of research and instruction design..

Dr. Peters is a member of Delta Tau Kappa (FSU), Alpha Kappa Delta (USC), and the Fulbright Alumni Association.



The THOUGHT/ACTION NETWORK (TAN) is a critical thinking and decision making skills development research effort designed to affect K-12 instructional strategies.

IF learning is to have personal meaning and importance in their lives, students must be actively involved in the process; amassing relevant data, pondering alternatives, analyzing outcomes, selecting from among alternative options, and making decisions.

Intelligence and ability know no boundries. These qualities are latent in us all; irregardless of nationality, social class, race or sex. It takes formal education, skills development, and opportunities to bring these potentialities to life in each-and-every one of us.

Learning can take place at any time, in any locale, involving any individual or group, in a diversity of field-based and/or classroom-oriented experiences.

Bruner and Taba based their discovery methods on critical thinking processes, e.g., data interpretation, facts and principles application, and logical reasoning. The identification of decision occasions and alternatives, as well as choice and reflection, are recognized stages in the decision making process.

Elkins/Heaton/Lewis documented locating and evaluating information, analyzing data, and problem solving processes. Russell/Hunter's GUIDED PRACTICE strategy and Stevens/Rosenshine's PROMPTED or CONTROLLED

PRACTICE of having students apply new skills under the supervision of teachers emphasize direct student involvement in the discovery process.

No longer is it acceptable for individuals to function as passive learners. Structured learning situations provide an atmosphere of security. The individual is familiar with the learning environment and knows the predictable outcome(s) ahead of time; nothing is risked. Once conditioned responses are learned, and the RULES OF THE GAME are instilled, the individual is confident and assured of success. Closure is guaranteed.

Spontaneous situations are laced with uncertainty and fear. Because most real life situations are spontaneous in nature, students must be equipped with the abilities, knowledge, skills and mental set needed to successfully cope with life's traumas.

In order for children and youths to become active learners; to be critical thinkers, creative individuals, and decision makers, it is necessary that teachers, too, become better skilled in these graces. Many teachers have created structured situations, for

themselves, which provide personal security and reward; without consideration for the interests/needs/individuality of students. Instead of the process being adjusted to the uniqueness of students, students are coerced and moulded to suit the system as designed. Situations or environments are constructed to serve the needs of faculty rather than address the needs of students.

Structured learning situations must serve the needs of students, and must provide alternative experiences; diverse opportunities for learners to assess personal abilities and skills. In this schema, not everyone is required to always do the same thing, at the same time, and in the same manner. Each structured situation is like a tree; rooted in clearly defined goals and objectives with numerous activities like branches stretching skyward. Each branch represents a unique way for individuals to achieve common goals and objectives.

By blending structure and spontaneity into meaningful learning experiences, and by incorporating these experiences into instructional strategies and

curricula, individuals' abilities to perceive the construct of spontaneous situations, to analyze data and circumstances, and to act; in order to achieve goals, are refined and reinforced.

ACTION ORIENTED individuals possess the abilities, knowledge, skills and mental determination to act ... in order to solve perceived problems. In order for individuals to be proactive, they must acquire knowledge and skills through direct involvement with diverse learning situations. Opportunities must exist for knowledge/skills application and refinement as well as the acquisition of new/additional data and abilities.

Learners should not be trained merely to absorb isolated facts and information, but should be developed into initiators of processes resulting in knowledge/skills acquisition and application.

Today, we live in a global society. That is not to say that we do not possess national allegiances nor that we do not seek to promote the welfare of our respective nations. What it does mean is that collectively, all of us are faced with the inescapable realization of global interdependence and interrelatedness. Social studies curricula should be contemporary issues/events oriented. Current events discussions provide a springboard for indepth study, and the opportunity for the application/refinement/reinforcement of previously learned concepts/content/skills.1

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1 TEACHER PRESERVICE/INSERVICE TRAINING IN INTERNATIONAL EDUCATION. Florida Commission On International Education June 1987

PAM

The PROACTIVE ACTION MODEL strategy is one way to blend structure and spontaneity into meaningful learning experiences, and to incorporate these experiences into the curriculum and instructional strategies of diverse courses of study.

Student involvement with the PAM process affects the development and reinforcement of organizational, critical thinking, and decision making skills. This involvement also hones abilities to perceive the nature and construct of spontaneous situations, to analyze data and circumstances, and to act. Students become engaged in inductive and deductive reasoning activities; mentally jumping back-and-forth from specifics to generalities and vice versa.

When PAM components are synthesized, the process is an integrated and systematic activity involving the application of acquired concepts, knowledge, and skills to diverse situations. (SEE PAGE 6)

AFFECTIVE SKILLS	COGNITIVE SKILLS	PAM COMPONENTS	COMPONENT ACTIVITIES
	2.0 Comprehension	**PERCEPTION(S)** using acquired knowledge/skills/attitudes to perceive a situation. Knowledge/skills/attitudes are acquired from direct and vicarious experiences.	identify a conflict/issue/problem/situation.
1.0 Receiving	1.0 Knowledge		
	6.0 Evaluation 5.0 Synthesis 3.0 Application	**THOUGHT PATTERN** relating isolated bits of knowledge/skills with attitudes to solve problems/resolve conflicts/clarify understandings.	research data, review data amassed, generate an hypothesis, and develop a research design.
2.0 Responding	2.0 Comprehension		
1.0 Receiving	1.0 Knowledge		
	6.0 Evaluation 5.0 Synthesis 4.0 Analysis 3.0 Application	**ACTION(S)** overt behavior resulting in something being accomplished/resolved/understood. Overt behavior results from knowledge/skills/attitudes interfacing.	conduct an empirical study, collect data, data assessment, and arrive at a conclusion.
3.0 Valuing			
2.0 Responding			
1.0 Receiving	2.0 Comprehension		
	6.0 Evaluation 5.0 Synthesis 4.0 Analysis 3.0 Application	**CLOSURE** implementation/evaluation/documentation/of a strategy or modus operandi.	design a resolution strategy, implement the strategy, document the strategy process, and report process results.
2.0 Responding			
1.0 Receiving	2.0 Comprehension		

FEEDBACK

FEEDBACK data providing additional/updated information is delivered to PAM components and may have positive/negative effects on future component processes.

Any effective and meaningful instructional experience emphasizing LEARNING-BY-DOING is based on affective and cognitive skills development. Clearly defined and articulated goals/objectives point the way for this systematic development.

Teachers in all subject matter areas should be educated in the concept of global interdependency. An integral part of preservice/inservice teacher training should be a basic concepts/content/skills CORE geared to principles of economics/geography/history/political science/sociology and foreign language enrichment. Teachers should be directly involved in the design/development/delivery of international education units related to their respective disciplines-of-knowledge.

The PAM process is applicable to any-and-all subject matter areas. Its usage throughout the curriculum accomplishes several goals re student learning and skills development.

> A common method of inquiry in all subject matter areas; allowing students to continually apply/reinforce/refine creative skills.

Students perceive interrelationships among/ between varied subject matter content as well as a common method of inquiry and skills development.

A learning tool that, once mastered, can be applied repeatedly to a variety of of activities and experiences by the INDIVIDUAL without tutorial supervision.

A strategy to enhance further inquiry as data is collected, decisions are made, action is taken, and new (often unexpected) situations arise.

The essence of true learning is the ability of individuals; equipped with concepts/knowledge/skills/ values, to sail uncharted waters, to make discoveries, to reason, and to act - according to intrinsic motivation.

There are various classroom/field-based skill building activities which can enhance student abilities and competence in critical thinking and decision making. Among the activities are:

the design and construction of table-top diaramas, maps, and visual aids;

development of research papers;

role playing;

development and presentation of oral reports;

debating;

video recorded community studies;

interviewing;

researching primary and secondary source materials.

TOPIC: Preservation of natural resources
ACTIVITY: Role Playing

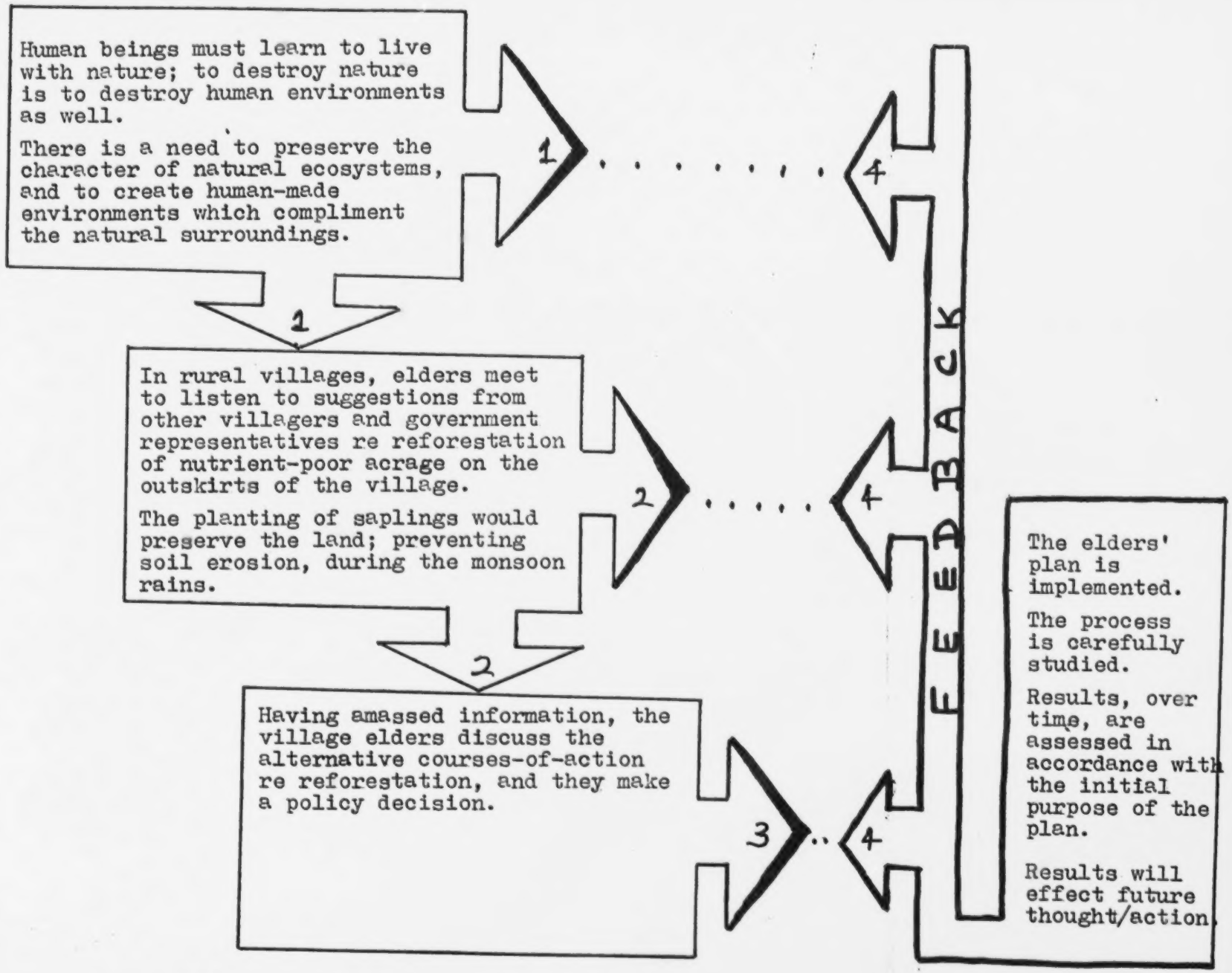
Students role play individuals involved in determining a course-of-action designed to preserve the natural environment of a given community.

Role playing is a creative activity which allows each-and-every participant to have input into the final determination(s) made and the action(s) taken.

Because most role playing activities are open-ended ... and therefore spontaneous in nature ... participants are often anxious because outcomes are not known before the climax.

Role playing simulations require the full attention and involvement of the individual in the process. Each learner must concentrate his/her attention and efforts on the task(s) at hand. The individual must learn to coordinate mind and body, best manage/utilize available time, and hone his/her sense of intuition and perception.

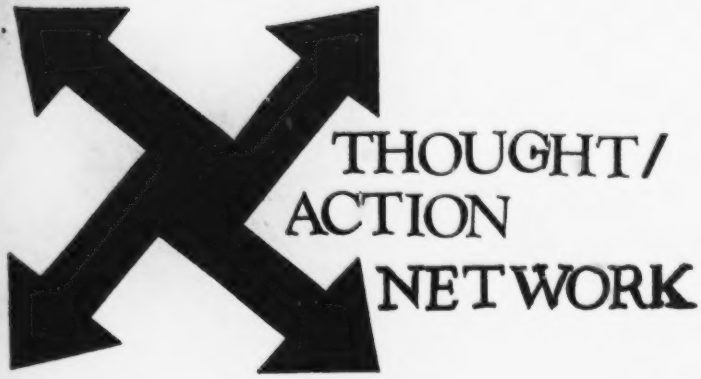
SEE PAGE 11


Human beings must learn to live with nature; to destroy nature is to destroy human environments as well.
There is a need to preserve the character of natural ecosystems, and to create human-made environments which compliment the natural surroundings.
1
1
In rural villages, elders meet to listen to suggestions from other villagers and government representatives re reforestation of nutrient-poor acrage on the outskirts of the village.
The planting of saplings would preserve the land; preventing soil erosion, during the monsoon rains.
2
2
Having amassed information, the village elders discuss the alternative courses-of-action re reforestation, and they make a policy decision.
3
4
4
4
FEEDBACK
The elders' plan is implemented.
The process is carefully studied.
Results, over time, are assessed in accordance with the initial purpose of the plan.
Results will effect future thought/action.

In order for teachers to become skilled in critical thinking and decision making, inservice training programs should be designed to provide diverse opportunities for skills acquisition/ application/enrichment/refinement.

The THOUGHT/ACTION NETWORK has designed an inservice program which treats the three inter-related components: information/instruction/ development.

SEE PAGE 13



I^2D Inservice

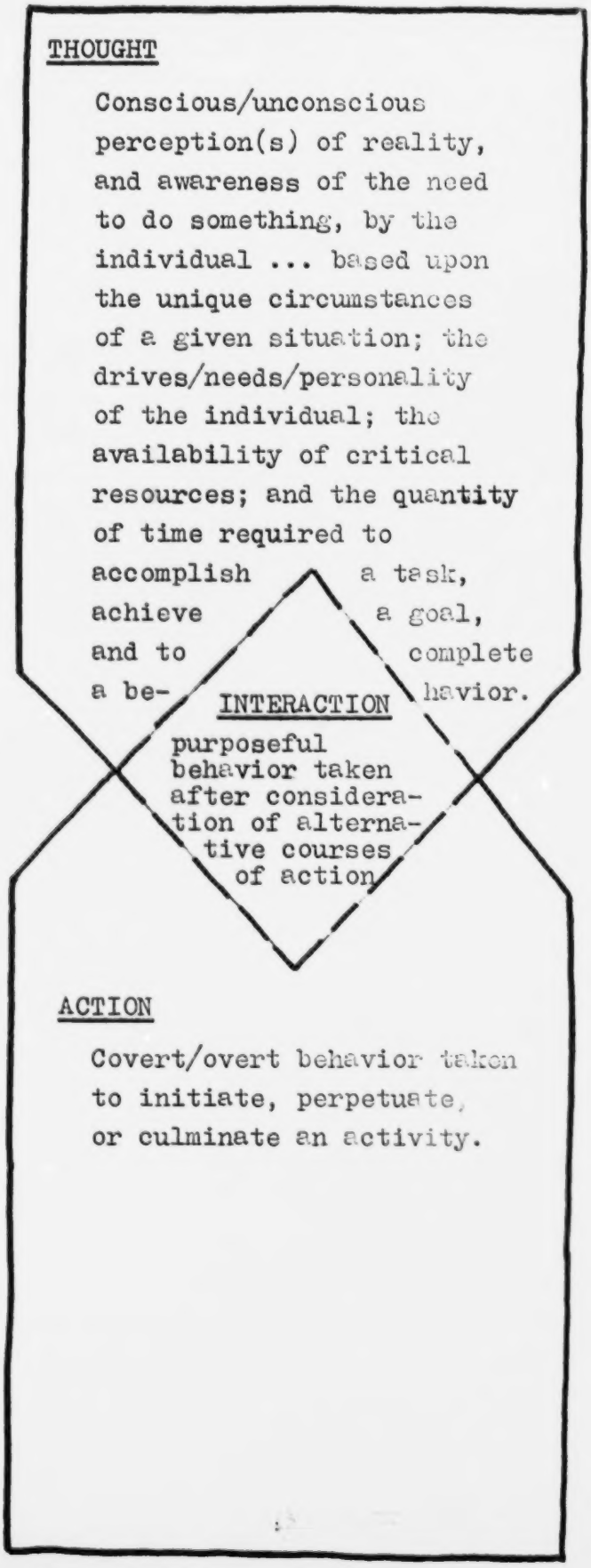
Programs for faculty and staff enrichment/application/ reinforcement/refinement in concepts, content, and skills should encompass:

Informational training; data acquisition

Instructional training; application of acquired data/ skills

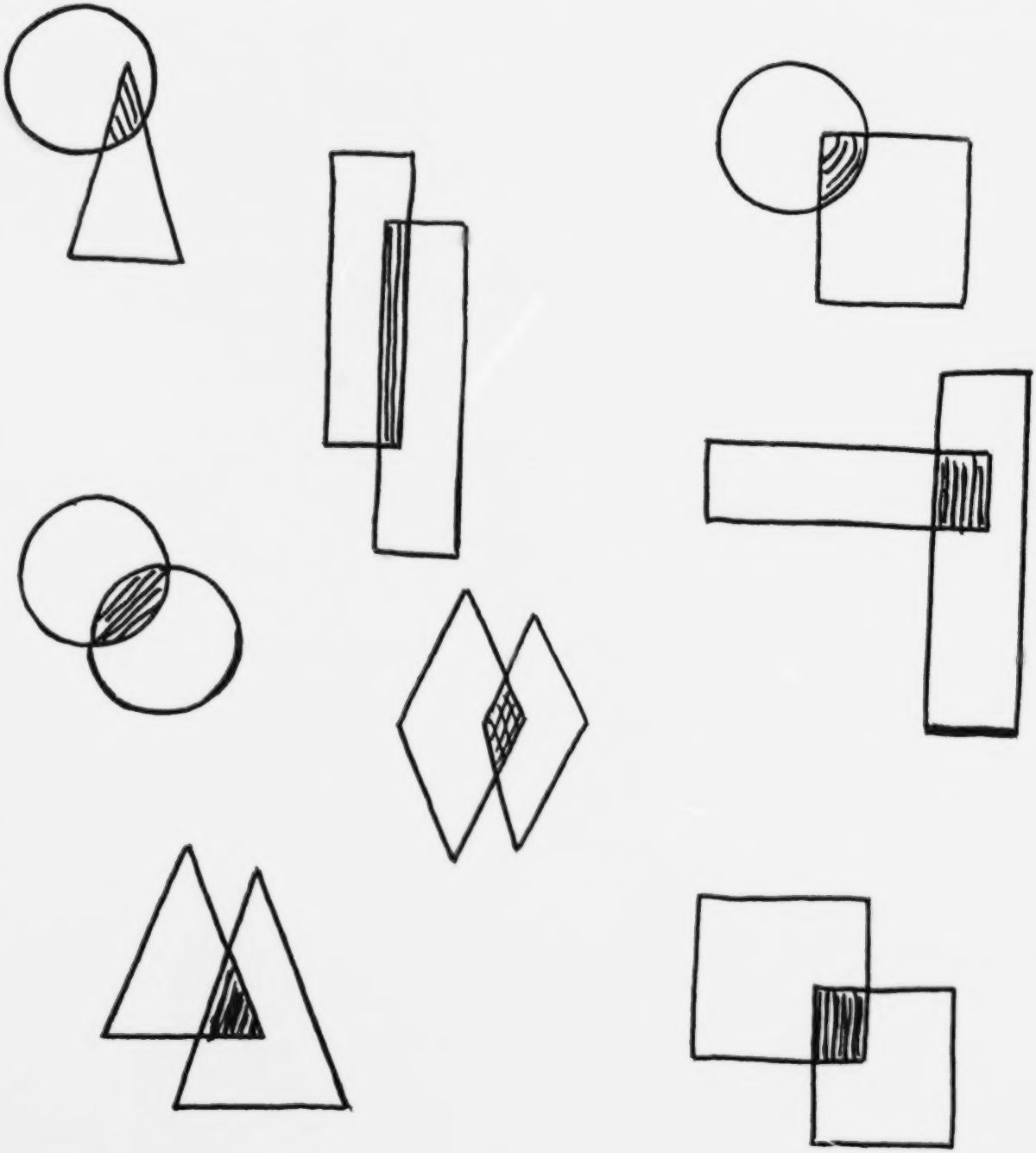
Developmental training; skills acquisition.

Each I^2D component is an entity unto itself, but all three are interrelated to form a holistic approach to interval training.


THOUGHT
Conscious/unconscious perception(s) of reality, and awareness of the need to do something, by the individual ... based upon the unique circumstances of a given situation; the drives/needs/personality of the individual; the availability of critical resources; and the quantity of time required to accomplish a task, achieve a goal, and to complete a behavior.
INTERACTION
purposeful behavior taken after consideration of alternative courses of action
ACTION
Covert/overt behavior taken to initiate, perpetuate, or culminate an activity.

THOUGHT/ACTION NETWORK
Interaction Model

Any of several graphic designs can be used to depict the model construct.



Developing critical thinking/decision making skills in students and others is not the sole domain/responsibility of classroom teachers. Other educationists[1] must assume a role in skills development/application/reinforcement/refinement at their respective levels of operation.

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1 anyone directly or indirectly involved with the formal education process; K-12, post-secondary, adult/community education, or private sector training/retraining programs as well as military schooling.

Administrators, consultants, evaluators, school board members, staff personnel, and systems analyists are but a few examples.

There are several exercises, in the social studies, which can be incorporated into a course-of-study; whether a year-long elective/required subject, a semester course, a unit, or a one-class lesson. These activities should focus on critical thinking/decision making skills development and application/reinforcement/refinement.

It should be remembered that any/all skills are taught/instilled developmentally ... from simple to the more-complex. At best, skills are tools of learning and reasoning.

Skills are developed through systematic instruction and practice.

Critical thinking/decision making skills include:

- researching primary/secondary sources;
- collecting relevant data;
- interpreting data;
- summarizing research findings;
- generalizing from specifics to a global plane.

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